

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application.

Claims 5 and 7-9 are pending in the application. Claim 5 is independent. Claims 5, 7 and 9 are amended. Claims 1-4 and 6 are canceled without prejudice to or disclaimer of the subject matter contained therein.

Reconsideration of this application, as amended, is respectfully requested.

Reasons for Entry of Amendments

At the outset, it is respectfully requested that this Amendment be entered into the Official File in view of the fact that the amendments to the claims automatically place the application in condition for allowance.

In the alternative, if the Examiner does not agree that this application is in condition for allowance, it is respectfully requested that this Amendment be entered for the purpose of appeal. This Amendment reduces the issues on appeal by placing the claims in compliance with 35 U.S.C. § 112, First Paragraph, and by canceling claims 1-4 and 6 and incorporating the limitations of claim 6 into independent claim 5. This Amendment was not presented at an earlier date in view of the fact that Applicants did not fully appreciate the Examiner's position until the Final Office Action was reviewed.

Claim Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1-9 are rejected under 35 U.S.C. § 112, First Paragraph, for lack of enablement. It is respectfully submitted that independent claim 1 is canceled, thereby rendering the rejection of claim 1 and its dependent claims under 35 U.S.C. § 112, First Paragraph, moot. Moreover, independent claim 5 is amended to delete the limitation which is alleged to lack enablement. Accordingly, reconsideration and withdrawal of the rejections of claims 1-9 under 35 U.S.C. § 112, First Paragraph, is respectfully requested.

Claim Rejections Under 35 U.S.C. §§ 102(b) and 103(a)

Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,547,888 to Yamazaki. Claims 4 and 7-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki. Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki in view of U.S. Patent No. 5,602,410 to Schwalke et al. These rejections, to the extent that they apply to the presently pending claims, are respectfully traversed.

While not conceding the appropriateness of the rejections, but merely to expedite the prosecution of the instant application, claims 1-4 and 6 are canceled, thereby rendering the rejection of these claims under 35 U.S.C.

§102(b) and §103(a) moot. Independent claim 5 is amended to incorporate the limitations of claim 6 and recite additional limitations. Independent claim 5 now recites a combination of elements in an unsymmetrical semiconductor device, including “a substrate having a first source/drain region and a second source/drain region therein, wherein the first source/drain region and the second source/drain region have different ion concentrations.”

It is respectfully submitted that the combination of elements recited in independent claim 5, as amended, is not disclosed or made obvious by the applied prior art of record, including Yamazaki and Schwalke et al.

Yamazaki discloses an asymmetrical LDD type MOS transistor which includes impurity diffusion drain and source regions 7D and 7S, as shown in FIG. 8G. The impurity diffusion regions 7D and 7S are formed at the same time and have the same ion concentration, N^+ . An N^- type impurity diffusion region 5D is additionally formed inside the drain region 7D merely to constitute the LDD structure. Therefore, Yamazaki does not teach or suggest a combination of elements in an unsymmetrical semiconductor device, including “a substrate having a first source/drain region and a second source/drain region therein, wherein the first source/drain region and the second source/drain region have different ion concentrations,” as recited in claim 5.

In rejecting claims 7-9, the Examiner concedes on page 4 of the Office Action that Yamazaki does not actually teach the limitations of claims 7-9, but

that these claim limitations would have been obvious to one having ordinary skill in the art. However, Applicants respectfully disagree with this contention and respectfully submit that Yamazaki does not teach or suggest “a contact plug formed in the self-aligned contact hole, the contact plug being in contact with the first sidewall spacers and the first source/drain region” as recited in 7, a “contact plug ... in contact with a bit line” as recited in claim 8 and a “contact plug ... not disposed directly above the first and second gates,” as recited in claim 9.

On page 6 of the Office Action, the Examiner provides the following references as allegedly teaching the use of a plug as a contact structure: Bryant (U.S. 6,188,112), Liaw et al. (U.S. 5,998,249) and Wu et al. (U.S. 5,545,884). However, it is respectfully submitted that these references do not appear to teach or suggest the above-cited limitations of claims 7-9.

In rejecting claim 3, the Office Action relies on Schwalke et al. for a teaching of a gate including a cap insulating layer. However, Schwalke et al. does not teach or suggest the above-cited limitations of claim 5, and therefore does not cure the deficiencies of Yamazaki with respect to claim 5.

In view of the foregoing, it is respectfully submitted that the combination of elements set forth in independent claim 5 is not disclosed or made obvious by the applied prior art of record, including Yamazaki and Schwalke et al. Accordingly, independent claim 5 is allowable. Since the dependent claims

depend from allowable independent claim 5, the dependent claims are also allowable for at least the reasons set forth above, as well as for the additional limitations set forth therein. Therefore, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) and §103(a) and allowance of all claims are respectfully requested.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

However, if there are any outstanding issues, the Examiner is invited to telephone Sam Bhattacharya (Reg. No. 48,107) at 703-205-8000 in an effort to expedite prosecution.

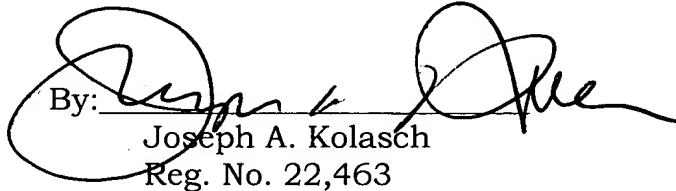
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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